

REMARKS

By this amendment, Claims 2 and 15 are amended, merely to provide proper antecedent basis in the claims. No new matter is introduced in the application by way of these amendments, nor do these amendments elicit a new search of the prior art. No claims have been added or cancelled. Hence, Claims 1-26 are pending in the application.

SUMMARY OF THE REJECTIONS

Claims 1, 13, 14 and 26 were rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to meet the written description requirement.

Claims 1-3, 5, 13-16, 18 and 26 were rejected under 35 U.S.C. §102(b) as allegedly anticipated by Applicant's Admitted Prior Art ("AAPA"). Claims 4 and 17 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over AAPA. Claims 6 and 19 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over AAPA in view of Megiddo ("*Megiddo*"; U.S. Pat. No. 6,182,070). Claims 7, 12, 20 and 25 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over AAPA in view of Ogi ("*Ogi*"; U.S. Pat. No. 5,854,938). Claims 8, 10, 21 and 23 were rejected 35 U.S.C. §103(a) as allegedly unpatentable over AAPA in view of Couch et al. ("*Couch*"; U.S. Pat. No. 6,604,096). Claims 9, 11, 22, and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over AAPA, *Ogi* and in further view of *Couch*.

REJECTIONS NOT BASED ON THE PRIOR ART

Rejection under 35 U.S.C. §112, first paragraph

Claims 1, 13, 14 and 26 were rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to meet the written description requirement on the grounds that these claims contain subject matter which is not described in the specification in such a way as to reasonably convey to one skilled in the art the inventors had possession of the claimed invention.

Specifically, the Office Action alleged that the specification fails to mention or teach a method **for determining a range of each bucket based on a number of the distribution keys associated with the sampled set of data items that fall within a range.** This rejection is traversed.

A manner in which bucket ranges can be determined based on the number of distribution keys associated with the sampled set of data items that fall within a range is described in the specification, by way of example, at page 9, line 14 through page 10, line 9. In the example, the goal is to distribute data items from a particular set of data evenly to four buckets, where the set of data includes data for persons having ages from 0 to 99 (i.e., age is the distribution key), and a sample of 200 data items is randomly selected from the set. Hence, in this example, the ranges to use to distribute the data items to the four buckets are determined for each bucket, based on the sample, in a manner that would equally distribute the data into the buckets. Equally distributing the data among the buckets is a matter of user choice, and the actual criteria for selecting the ranges for the buckets could be different from this example. However, the more equal the distribution among the buckets, typically, the more efficient are subsequent parallel operations performed on the data items (*see* page 1, line 20 through page 2, line 4).

With (a) the goal of equal distribution across buckets, with (b) 4 buckets, and with (c) 200 sample data items, it is clear that the 4 bucket ranges would be determined based on ranges that each encompasses approximately 50 (200 samples/4 buckets) sampled data items. Hence, each range should encompass approximately 25% of the sampled data items, as described at page 9, line 25 through page 10, line 3, and the ranges are determined based on what ranges result in each of the 4 buckets encompassing 25% of the sampled data items. Because, in the example, 25% of the sampled data items fall within a range of 0-14; 25% fall within the range

of 15-40; 25% fall within the range of 41-70; and 25% fall within the range of 71-99, the ranges to assign to each bucket is determined to be 0-14, 15-40, 41-70 and 71-99.

Since the foregoing example is described in the specification in a clear and concise manner, the specification does convey to one skilled in the art that Applicants had possession of the invention recited in Claim 1 at the time the application was filed. Based on the specification as originally filed, as shown by the foregoing reiteration, a *prima facie* case of “inadequate written description” under 35 U.S.C. §112, first paragraph, as applied to Claim 1, is not established. Hence, Claim 1 is valid and patentable under the written description requirement of 35 U.S.C. §112, first paragraph. Likewise, because the steps recited in the computer-readable medium of Claim 14 mirror the steps recited in the method of Claim 1, and because Claim 13 depends from Claim 1, Claims 13 and 14 are also valid and patentable under the written description requirement of 35 U.S.C. §112, first paragraph. Therefore, withdrawal of the rejection of Claims 1, 13 and 14 under 35 U.S.C. §112, first paragraph is requested.

REJECTIONS BASED ON THE PRIOR ART

I. Rejection under 35 U.S.C. §102(b)

I.1 Claims 1-3, 5, 13-16, 18 and 26

Claims 1-3, 5, 13-16, 18 and 26 were rejected under 35 U.S.C. §102(b) as allegedly anticipated by Applicant’s Admitted Prior Art (“AAPA”). This rejection is traversed.

The Office Action relies on the “Background of the Invention” (hereinafter “Background”) section in the anticipation rejection of these claims, as Applicant Admitted Prior Art (AAPA). However, for a proper anticipation rejection, a reference must show each and every feature of a claim in the same combination as claimed. Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1548, 220 USPQ 193, 198 (Fed. Cir. 1983). However, several express features

of Claim 1 are not disclosed in the Background. Therefore, the Background does not anticipate Claim 1. Specific differences between Claim 1 and the Background are as follows.

First, in making the rejection, the Office Action seems to rely on the statement in the Background that “[d]epending on the operation involved, the distribution may be random, based on values associated with the data items” (emphasis added). In the quotation, the “distribution” refers to the distribution of data items among a set of processes that will process the data items. There is no mention whatsoever of performing any form of sampling. However, the Office Action relies on this statement (presumably because it contains the word “random”) to support the assertion of anticipation of the Claim 1 recitation of **“randomly selecting data items from said particular set of data to produce a sampled set of data items”**. These two statements are clearly different. The Background statement refers to a random distribution of data items among a set of processes, *not a random selection of data items from a set of data, which are used to determine ranges for assigning to buckets, for eventually distributing the set of data items to the buckets*. Hence, discussion of a random distribution process, such as in the Background, does not anticipate a method step in which a random sample of data items are selected from a set of data. Furthermore, the method recited in Claim 1 is not a random distribution process, but is a distribution process that is based on a sampled set of data items, i.e., a non-random distribution process.

Next, the Office Action seems to rely on a discussion in the Background that generally addresses a process of assigning data items to buckets based on the distribution key for a given data item falling within the range of a given bucket. Such a process is, admittedly, well-known and commonly used. However, this statement says nothing about *how* the ranges of buckets were established. Hence, the general description of a common process does not anticipate Claim 1, which recites the step of **determining a range of each bucket based on a number of**

the distribution keys associated with the sampled set of data items that fall within a range.

The Background discussion clearly lacks any discussion of *how to determine* the ranges to assign to the buckets, which is addressed in Claim 1.

For the foregoing reasons, a *prima facie* case of anticipation is not established because the Background (considered AAPA by the Office Action) does not disclose each and every element of Claim 1. Therefore, withdrawal of the rejection of Claim 1 under 35 U.S.C. §102(b) is kindly requested.

Claim 2 recites similar steps as recited in Claim 1, such as **randomly selecting data items** from a particular set of data and **determining ranges based on distribution keys** associated with the selected data items, both of which are already discussed above in reference to Claim 1. The discussion of these steps in view of the Background, in reference to Claim 1, applies equally to Claim 2 and shows why a *prima facie* case of anticipation is not established with respect to Claim 2. Withdrawal of the rejection of Claim 2 under 35 U.S.C. §102(b) is requested.

Claim 3 depends from Claim 2; Claims 5 and 13 depend from Claim 1; the steps recited in the computer-readable medium of Claim 14 mirror the steps recited in the method of Claim 1; Claims 18 and 26 depend from Claim 14; the steps recited in the computer-readable medium of Claim 15 mirror the steps recited in the method of Claim 2; and Claim 16 depends from Claim 15. Hence, the remarks presented above in reference to Claims 1 and 2 are equally applicable to these related claims and no further remarks are necessary because, for at least these same reasons, Claims 3, 5, 13-16, 18 and 26 are also not anticipated by the Background. For at least these reasons, withdrawal of the rejection of Claims 3, 5, 13-16, 18 and 26 under 35 U.S.C. §102(b) is requested.

II. Rejections under 35 U.S.C. §103(a)

II.1 Claims 4 and 17

Claims 4 and 17 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over AAPA. This rejection is traversed.

The Office Action again relies on the Background as AAPA, to support the allegation that the steps of randomly selecting data items from a particular set of data and determining ranges based on distribution keys associated with the selected data items are disclosed in the Background and, therefore, contribute to the alleged obviousness of Claims 4 and 17.

However, it is already shown above that the Background does not disclose, suggest or motivate these steps as recited in the claims from which Claims 4 and 17 depend.

Claim 4 depends from Claim 2; and Claim 17 depends from Claim 15. Hence, the remarks presented above in reference to Claims 2 and 15 are equally applicable to these related claims. No further remarks are necessary because, for at least these same reasons, Claims 4 and 17 are not made obvious by the Background, in view of any other cited art. For at least these reasons, withdrawal of the rejection of Claims 4 and 17 under 35 U.S.C. §103(a) is requested.

II.2 Claims 6 and 19

Claims 6 and 19 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over AAPA in view of *Megiddo*. This rejection is traversed.

The Office Action again relies on the Background as AAPA, to support the allegation that the steps of randomly selecting data items from a particular set of data and determining ranges based on distribution keys associated with the selected data items are disclosed in the Background and, therefore, contribute to the alleged obviousness of Claims 6 and 19.

However, it is already shown above that the Background does not disclose, suggest or motivate these steps as recited in the claims from which Claims 6 and 19 depend.

Claim 6 depends from Claim 2; and Claim 19 depends from Claim 15. Hence, the remarks presented above in reference to Claims 2 and 15 are equally applicable to these related claims. No further remarks are necessary because, for at least these same reasons, Claims 6 and 19 are not made obvious by the Background, in view of any other cited art. For at least these reasons, withdrawal of the rejection of Claims 6 and 19 under 35 U.S.C. §103(a) is requested.

II.3 Claims 7, 12, 20 and 25

Claims 7, 12, 20 and 25 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over AAPA in view of *Ogi*. This rejection is traversed.

The Office Action again relies on the Background as AAPA, to support the allegation that the steps of randomly selecting data items from a particular set of data and determining ranges based on distribution keys associated with the selected data items are disclosed in the Background and, therefore, contribute to the alleged obviousness of Claims 7, 12, 20 and 25. However, it is already shown above that the Background does not disclose, suggest or motivate these steps as recited in Claims 7 and 20, and in the claims from which Claims 12 and 25 depend.

Claim 12 depends from Claim 5; and Claim 25 depends from Claim 18. Hence, the remarks presented above in reference to Claims 1, 5 and 18 are equally applicable to these claims that recite same or similar steps. No further remarks are necessary because, for at least these same reasons, Claims 7 and 20 and Claims 12 and 25 are not made obvious by the Background, in view of any other cited art. For at least these reasons, withdrawal of the rejection of Claims 7, 12, 20 and 25 under 35 U.S.C. §103(a) is requested.

II.4 Claims 8, 10, 21 and 23

Claims 8, 10, 21 and 23 were rejected 35 U.S.C. §103(a) as allegedly unpatentable over AAPA in view of *Couch*. This rejection is traversed.

The Office Action again relies on the Background as AAPA, to support the allegation that the steps of randomly selecting data items from a particular set of data and determining ranges based on distribution keys associated with the selected data items are disclosed in the Background and, therefore, contribute to the alleged obviousness of Claims 8, 10, 21 and 23. However, it is already shown above that the Background does not disclose, suggest or motivate these steps as recited in the claims from which Claims 8, 10, 21 and 23 depend.

Claim 10 depends from Claim 8, which depends from Claim 1; and Claim 23 depends from Claim 21, which depends from Claim 14. Hence, the remarks presented above in reference to Claims 1 and 14 are equally applicable to these related claims. No further remarks are necessary because, for at least these same reasons, Claims 8, 10, 21 and 23 are not made obvious by the Background, in view of any other cited art. For at least these reasons, withdrawal of the rejection of Claims 8, 10, 21 and 23 under 35 U.S.C. §103(a) is requested.

II.5 Claims 9, 11, 22 and 24

Claims 9, 11, 22, and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over AAPA, *Ogi* and in further view of *Couch*. This rejection is traversed.

The Office Action again relies on the Background as AAPA, to support the allegation that the steps of randomly selecting data items from a particular set of data and determining ranges based on distribution keys associated with the selected data items are disclosed in the Background and, therefore, contribute to the alleged obviousness of Claims 9, 11, 22, and 24.

However, it is already shown above that the Background does not disclose, suggest or motivate these steps as recited in the claims from which Claims 9, 11, 22, and 24 depend.

Claim 11 depends from Claim 9, which depends from Claim 7; and Claim 24 depends from Claim 22, which depends from Claim 20. Hence, the remarks presented above in reference to Claims 7 and 20 are equally applicable to these related claims. No further remarks are necessary because, for at least these same reasons, Claims 9, 11, 22, and 24 are not made obvious by the Background, in view of any other cited art. For at least these reasons, withdrawal of the rejection of Claims 9, 11, 22, and 24 under 35 U.S.C. §103(a) is requested.

CONCLUSION

For at least the reasons set forth above, it is respectfully submitted that the pending claims (1-26) are in condition for allowance. Therefore, the issuance of a formal Notice of Allowance is believed next in order, and that action is most earnestly solicited.

The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Please charge any shortages or credit any overages to Deposit Account No. 50-1302.

Respectfully submitted,

HICKMAN PALERMO TRUONG & BECKER LLP

Date: 7/22/04

John D. Henkhaus
John D. Henkhaus
Reg. No. 42,656

1600 Willow Street
San Jose, CA 95125
(408) 414-1080
Facsimile: (408) 414-1076

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450

on 7/22/2004

by Darci Sakamoto
Darci Sakamoto